DIP Aluminum Solid Electrolytic Capacitor - ED5K series

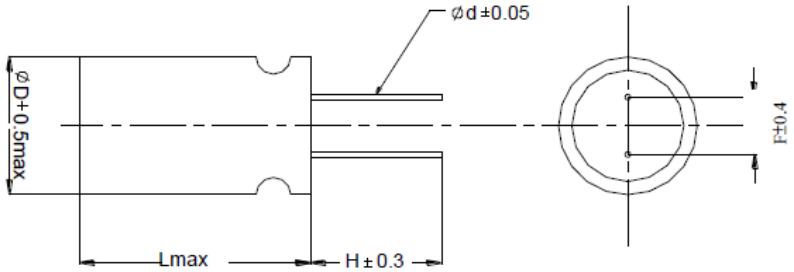
■ Introduction

- Super low ESR, High ripple current capability
- Rated voltage: 2.5V ~ 16Vdc
- Endurance: 5,000 hours at 105℃
- Suitable for DC-DC converters, voltage regulators and decoupling applications
- RoHS Compliant

■ Specifications

ITEMS	CONDITIONS	CHARACTERISTICS	
Category Temperature Range		-55 to +105℃	
Rated Voltage Range		2.5 to 16 Vdc	
Capacitance Tolerance	at 20℃, 120Hz	±20% (M)	
Surge Voltage	15℃ to 35℃	Rated voltage x 1.15V	
Leakage Current	at 20℃ after 2 minutes	Please see the Electrical Characteristics page	
Dissipation Factor (tan δ)	at 20℃, 120Hz	0.1 max.	
Characteristics of Impedance at Low, High Temperature	at -55℃, 100KHz	Z(-55℃) /Z(+20℃) ≦1.25	
	at 105℃ 100KHz	Z(105℃) /Z(+20℃) ≦1.25	
Endurance	The specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 5,000 hours at 105℃.	Appearance	No significant damage
		Capacitance Change	≦ ±20% of the initial value
		DF (tan δ)	≦150% of the initial specified value
		ESR	≦150% of the initial specified value
		Leakage current	≦The initial specified value
Damp Heat, Steady State	The specifications shall be satisfied when the capacitors are restored to 20℃ after subjecting them to store at 60℃, 90 to 95% RH for 1,000 hours, without DC applied.	Appearance	No significant damage
		Capacitance Change	≦ ±20% of the initial value
		DF (tan δ)	≦150% of the initial specified value
		ESR	≦150% of the initial specified value
		Leakage current	≦The initial specified value
Surge Voltage	The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltages specified at 105℃ for 30 seconds through a protective resistor (R=1kΩ) and discharge for 5 minutes 30 seconds.	Appearance	No significant damage
		Capacitance Change	≦ ±20% of the initial value
		DF (tan δ)	≦150% of the initial specified value
		ESR	≦150% of the initial specified value
		Leakage current	≦The initial specified value

■ Shape and Dimensions (Unit: mm)



Size code	ϕD + 0.5max	L max	ϕd ± 0.05	F ± 0.4	H ± 0.3
0406	4.0	6.0	0.45	1.5	3.2
0606	6.3	6.0	0.45	2.5	3.2
0609	6.3	9.0	0.6	2.5	3.2
0809	8.0	9.0	0.6	3.5	3.2
0812	8.0	12.0	0.6	3.5	3.2

■ Ordering Information

ED	5K	0809	561	M	2R5
1	2	3	4	5	6

1. DIP Type
2. Series Name
3. Dimensions Code
4. Capacitance : **561**=560 µF.
5. Capacitance tolerance：**M**= ± 20%.
6. Working Voltage(WV)：**2R5** = 2.5 VDC ; **4R0** = 4.0 VDC.

■ Electrical Characteristics

Part No.	Size Code	Cap (µF)	WV/Vdc (SV)	Note(1) Leakage Current (µA)	tan δ	ESR (mΩmax/20℃, 100k to300kHz)	Rated Ripple Current (mArms/ 105℃/100kHz)
ED5K0606-561M-2R5	0606	560	2.5 (2.9)	500	0.10	10	3,900
ED5K0609-561M-2R5	0609	560		500	0.10	7	5,000
ED5K0809-561M-2R5	0809	560		500	0.10	7	5,700
ED5K0609-821M-2R5	0609	820		500	0.10	7	5,000
ED5K0809-821M-2R5	0809	820		500	0.10	7	5,700
ED5K0609-821M-3R0	0609	820	3 (3.4)	500	0.10	7	5,000
ED5K0609-561M-4R0	0609	560	4 (4.6)	500	0.10	24	2,400

Part No.	Size Code	Cap (μF)	WV/Vdc (SV)	Note(1) Leakage Current (μA)	tan δ	ESR (mΩmax/20℃, 100k to300kHz)	Rated Ripple Current (mArms/ 105℃/100kHz)
ED5K0606-101M-6R3	0606	100	6.3 (7.2)	126	0.10	35	2,100
ED5K0609-471M-6R3	0609	470		592	0.10	8	4,700
ED5K0609-561M-6R3	0609	560		705	0.10	8	4,700
ED5K0809-561M-6R3	0809	560		705	0.10	7	5,700
ED5K0406-100M-100	0406	10	10 (11.5)	300	0.10	80	700
ED5K0606-101M-160	0606	100	16 (18.4)	320	0.10	24	2,490
ED5K0609-101M-160	0609	100		320	0.10	35	2,300
ED5K0609-271M-160	0609	270		864	0.10	10	4,500
ED5K0809-271M-160	0809	270		864	0.10	10	5,000
ED5K0812-271M-160	0812	270		864	0.10	10	5,230
ED5K0812-471M-160	0812	470		1,505	0.10	10	5,230

Note(1). Leakage Current : DC rated voltage shall be applied between anode and cathode lead wire terminations of a capacitor through 1k protective resistance, and the leakage current shall be less than or equal to the value listed in above table after 2 minutes with the voltage reaching the rated value at 20±2℃.
If the value is doubtful, measure the leakage current after performing voltage treatment which shall contain the following steps:
Voltage treatment: (1) DC rated voltage is applied to the capacitors for 60 minutes at 105℃. (2) Cooled down to room temperature with applying voltage. (3) Discharged through a resistor of approximately 1Ω/V.